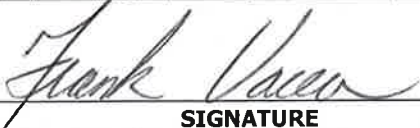



## CALIFORNIA ENVIRONMENTAL QUALITY ACT INITIAL STUDY AND CHECKLIST

<b>LEAD AGENCY</b> California High-Speed Rail Authority	<b>DATE</b> July 25, 2014
<b>RESPONSIBLE AGENCIES:</b> Federal Railroad Administration, California High-Speed Rail Authority	
<b>PROJECT TITLE/NO.</b> California High-Speed Rail System Burbank to Los Angeles Section	
<b>PREVIOUS ACTIONS CASE NO.</b> NOP for Project EIR/EIS for the Palmdale to Los Angeles Section of the California High-Speed Train System (2007) SCH: 2007031066  California High-Speed Train Final Program EIR/EIS (2005) SCH: 2001042045	<input checked="checked" type="checkbox"/> <b>DOES</b> have significant changes from previous actions.  <input type="checkbox"/> <b>DOES NOT</b> have significant changes from previous actions.
<b>PROJECT DESCRIPTION:</b> The proposed California High Speed Rail (HSR) System Burbank to Los Angeles Section (proposed Project) would create a portion of the HSR System proposed by the California High-Speed Rail Authority (Authority). The Authority and FRA certified a Program EIR/EIS for the entire California HSR System (Statewide Program EIR/EIS) in August 2005 as the first-phase of a tiered environmental review process. The proposed Project would connect the San Fernando Valley and Los Angeles to the mega-regions of California, contribute to economic development and a cleaner environment, create jobs, and preserve agricultural and protected lands. The proposed Project would include several potential alignments that would link the San Fernando Valley to the City of Los Angeles with an HSR System on fully grade-separated, dedicated tracks. The HSR System is envisioned as a state-of-the-art, electrically powered, high-speed, steel-wheel-on-steel-rail technology, which would employ the latest technology, safety, signaling, and automated train-control systems. (See Section 2 below for a more detailed Project Description.)	
<b>ENVIRONMENTAL SETTING:</b> The Project corridor is located within a highly urban environment. In the north, the Project corridor passes through the San Fernando Valley, and continues south to Los Angeles through the commercial/industrial areas adjacent to the existing railroad right-of-way.	
<b>PROJECT LOCATION:</b> The proposed Project is located within the County of Los Angeles, extending from the City of Burbank in the north to the City of Los Angeles (Los Angeles Union Station or LAUS) in the south. Alignment alternatives pass through the cities of Los Angeles, Burbank, and Glendale. The Project corridor is approximately 13 miles (21 kilometers) long and generally follows the existing railroad ROW, leading into Los Angeles. The Project corridor would begin at the proposed Burbank Airport Station in the City of Burbank and would end at LAUS.	

<b>DETERMINATION (To be completed by Lead Agency)</b>	
<b>On the basis of this initial evaluation:</b>	
<input type="checkbox"/> I find that the proposed project COULD NOT have a significant effect on the environment, and a <b>NEGATIVE DECLARATION</b> will be prepared.	
<input type="checkbox"/> I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A <b>MITIGATED NEGATIVE DECLARATION</b> will be prepared.	
<input checked="" type="checkbox"/> I find that the proposed project MAY have a significant effect on the environment, and an <b>ENVIRONMENTAL IMPACT REPORT</b> is required.	
<input type="checkbox"/> I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An <b>ENVIRONMENTAL IMPACT REPORT</b> is required, but it must analyze only the effects that remain to be addressed.	
<input type="checkbox"/> I find that although the proposed project could have a significant effect on the environment because all potentially significant effects (1) have been analyzed adequately in an earlier <b>ENVIRONMENTAL IMPACT REPORT</b> or <b>NEGATIVE DECLARATION</b> pursuant to applicable standards, and (2) have been avoided or mitigated pursuant to that earlier <b>ENVIRONMENTAL IMPACT REPORT</b> or <b>NEGATIVE DECLARATION</b> , including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.	
 <b>SIGNATURE</b>	 <b>TITLE</b>

**ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:**

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is "Potentially Significant Impact" as indicated by the checklist on the following pages.

- |  |   |  |
|--|---|--|
| <input checked="" type="checkbox"/> Aesthetics                 | <input checked="" type="checkbox"/> Agricultural and Forestry Resources | <input checked="" type="checkbox"/> Air Quality                        |
| <input checked="" type="checkbox"/> Biological Resources       | <input checked="" type="checkbox"/> Cultural Resources                  | <input checked="" type="checkbox"/> Geology and Soils                  |
| <input checked="" type="checkbox"/> Greenhouse Gas Emissions   | <input checked="" type="checkbox"/> Hazards and Hazardous Materials     | <input checked="" type="checkbox"/> Hydrology and Water Quality        |
| <input checked="" type="checkbox"/> Land Use and Planning      | <input checked="" type="checkbox"/> Mineral Resources                   | <input checked="" type="checkbox"/> Noise and Vibration                |
| <input checked="" type="checkbox"/> Population and Housing     | <input checked="" type="checkbox"/> Public Services                     | <input checked="" type="checkbox"/> Recreation                         |
| <input checked="" type="checkbox"/> Traffic and Transportation | <input checked="" type="checkbox"/> Utilities and Service Systems       | <input checked="" type="checkbox"/> Mandatory Findings of Significance |

## 1.0 Introduction

### 1.1 Overview

The California High-Speed Rail Authority (Authority) has prepared this Initial Study (IS) to evaluate the potential environmental consequences associated with the California High-Speed Rail System (HSR System). In the 2005 Statewide Program EIR/EIS, the Palmdale to Los Angeles Section of the HSR System was selected as a project section for further study with a project-level EIR/EIS. The HSR System Palmdale to Los Angeles Section would construct HSR infrastructure and provide HSR service between the City of Palmdale and Los Angeles Union Station (LAUS), located near downtown City of Los Angeles, generally following the State Route (SR) 14 corridor in the Antelope and Santa Clarita Valleys and the Metrolink/Union Pacific Railroad (UPRR)/Los Angeles County Metropolitan Transportation Authority (Metro) right-of-way in the San Fernando Valley and into LAUS following the course of the Los Angeles River. Since the 2005 Statewide Program EIR/EIS, several alternatives analyses have been conducted to further refine Project alternatives. The Authority's 2014 Business Plan calls for an Initial Operating Section (IOS) terminating in the San Fernando Valley with the first segment bookends relying on the connections to the existing metropolitan rail infrastructure for an interim period. As discussed in the 2014 Supplemental Alternatives Analysis (SAA), it would be beneficial to address the environmental effects of the HSR System from Palmdale to Burbank in one EIR/EIS and from Burbank to Los Angeles in a separate EIR/EIS. This would provide for more effective planning and public outreach in these highly populated areas. These two sections are of sufficient length to address relevant environmental matters. They each have logical termini, meaning that their end points are rational for transportation improvements and for the review of environmental impacts. Additionally, each section has independent utility, which means that the HSR System can function properly within each section, independent of additional improvements elsewhere. The assessment of HSR alternatives in the Burbank to Los Angeles Section will assure adequate opportunity for the consideration of alternatives for this section and adjacent sections of the HSR system. This IS evaluates the HSR System Burbank to Los Angeles Section (Project), which would construct HSR infrastructure and provide HSR service between the cities of Burbank and Los Angeles.<sup>1</sup>

Consistent with the Authority's tiered environmental process, the proposed Project will be subject to analysis in a second-tier or project-level EIR pursuant to the California Environmental Quality Act (CEQA).<sup>2</sup> One of the main objectives of CEQA is to disclose the potential environmental effects of proposed activities to the public and to decision makers. CEQA requires that the lead agency prepare a Notice of Preparation (NOP) when the proposed Project is anticipated to require an Environmental Impact Report (EIR). The lead agency may also prepare an IS describing the potentially significant impacts to be studied further in the EIR. This IS has been prepared, consistent with CEQA's tiering rules, to identify the areas where the project-level EIR must assess impacts. (Guidelines, § 15152.) The Authority is the lead agency under CEQA.

The proposed Project is also required to undergo environmental review pursuant to the National Environmental Policy Act (NEPA). NEPA requires that the lead agency prepare a Notice of Intent (NOI) when the proposed Project is anticipated to require an Environmental Impact Statement (EIS). The FRA is the lead agency for under NEPA.

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<sup>1</sup> This Initial Study, along with the NOP, NOI, and other documents for the Palmdale to Burbank Section Project are available online at:

[http://hsr.ca.gov/Programs/Statewide\\_Rail\\_Modernization/project\\_sections/burbank\\_losangeles.html](http://hsr.ca.gov/Programs/Statewide_Rail_Modernization/project_sections/burbank_losangeles.html)

<sup>2</sup> The Authority has prepared this Initial Study voluntarily and is not waiving any rights it may have related to Surface Transportation Board jurisdiction and regulation of this proposed project under the Interstate Commerce Commission Termination Act of 1995, including that Act's preemptive effect on CEQA's application to this proposed project.

## 1.2 Authority

The preparation of this IS is governed by two principal sets of documents: CEQA (Public Resources Code Section 21000, et seq.) and the State CEQA Guidelines (California Code of Regulations Section 15000, et seq.). Specifically, the preparation of initial studies is guided by Section 15063 of the State CEQA Guidelines, and Sections 15080–15097 of Article 7 guide the process for the preparation of an EIR. Where appropriate and supportive to an understanding of the issues, reference will be made either to the statute, the State CEQA Guidelines, or appropriate case law.

## 1.3 Scope of the IS

This IS evaluates the proposed Project's effects on the following resource areas:

- Aesthetics
- Agricultural and Forestry Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation and Traffic
- Utilities and Service Systems
- Mandatory Findings of Significance

## 1.4 Thresholds of Significance

This IS uses the standard thresholds of significance for the resource areas described above. These thresholds are provided in Appendix G of the 2014 CEQA Guidelines. These thresholds are presented in Section 3.0 Environmental Checklist Form.

## 1.5 Terminology of Impacts

The following terminology is used to describe the level of significance of impacts:

- **No Impact:** this finding is appropriate if the analysis concludes that the proposed Project would not affect the particular topic area in any way.
- **Less Than Significant Impact:** this finding is appropriate if the analysis concludes that the proposed Project would cause no substantial adverse change to the environment and requires no mitigation.
- **Less Than Significant Impact With Mitigation Incorporated:** this finding is appropriate if the analysis concludes that the proposed Project would cause no substantial adverse change to the environment with the inclusion of environmental commitments or mitigation measures that have been agreed to by the applicant.
- **Potentially Significant Impact:** this finding is appropriate if the analysis concludes that the proposed Project could have a substantial adverse effect on the environment, and therefore requires further analysis in the EIR/EIS document.

## 1.6 Organization of the IS

The content and format of this report are designed to meet the requirements of CEQA. The report contains the following sections:

**Chapter 1.0 – Introduction:** This chapter identifies the purpose and scope of the IS, the terminology used in the IS, and the organization of the IS.

**Chapter 2.0 – Project Description:** This chapter identifies the location, discusses the background, and provides a general description of each component of the Project used in the evaluation in Chapters 3 and 4.

**Chapter 3.0 – Environmental Checklist Form:** This chapter presents the CEQA Guidelines Appendix G Environmental Checklist Form with determinations of potential impacts due to implementation of the Project.

**Chapter 4.0 – References:** This chapter identifies all printed references and individuals cited in this IS.

**Chapter 5.0 – List of Preparers and Agencies/Persons Consulted:** This chapter identifies the individuals who prepared this IS and their area of technical specialty, as well as the agencies and persons who were consulted in the preparation of this IS.

## 2.0 Project Description

### 2.1 HSR System Background

The planning, design, construction, and operation of the HSR System are the responsibility of the Authority. The Authority's statutory mandate is to develop an HSR system that is coordinated with the State's existing transportation network, which includes intercity rail and bus lines, regional commuter rail lines, urban rail and bus transit lines, highways, and airports. The Authority's plans call for high-speed intercity train service on more than 800 miles (1,287.5 kilometers) of tracks throughout California, connecting the major population centers of the City of Sacramento, the San Francisco Bay Area, the Central Valley, the Los Angeles Basin, the Inland Empire, Orange County, and the City of San Diego (Figure 2-1).

The HSR System implementation is planned in two phases. Phase 1 would connect San Francisco and Los Angeles/Anaheim via the Pacheco Pass and the Central Valley. Phase 1 would have three distinct stages. First, an Initial Operating Section (IOS) will be constructed and placed in operation between the City of Merced and a station located in the San Fernando Valley. Second, the IOS would be expanded north on dedicated HSR infrastructure to the City of San Jose, a phase called Bay-to-Basin (BtoB). Third, the HSR System would be expanded north to the City of San Francisco and south to Los Angeles Union Station (LAUS) to complete the Phase 1 infrastructure construction for the Statewide HSR System. Under the Full Build scenario of Phase 1, dedicated HSR infrastructure would be extended from the City of San Jose to the City of San Francisco's Transbay Transit Center and from the City of Los Angeles to the City of Anaheim. The Palmdale to Burbank Section would be a critical link in Phase 1 of the HSR System, connecting the City of San Francisco and the Bay Area to the Los Angeles Basin.



**Figure 2-1**  
Proposed HSR System

Phase 2 would connect the Central Valley (Merced Station) to the State's capital, the City of Sacramento. Another extension in Phase 2 is planned to connect the City of Los Angeles to the City of San Diego. The HSR System would meet the provisions and requirements of the Safe, Reliable, High-Speed Passenger Train Bond Act, adopted by California voters in November 2008 and Proposition 1A, including the requirement for a maximum nonstop service travel time between the City of San Francisco and the City of Los Angeles of 2 hours and 40 minutes. Work on the HSR System is underway in the Central Valley. This proposed project would continue this effort between Burbank and Los Angeles.

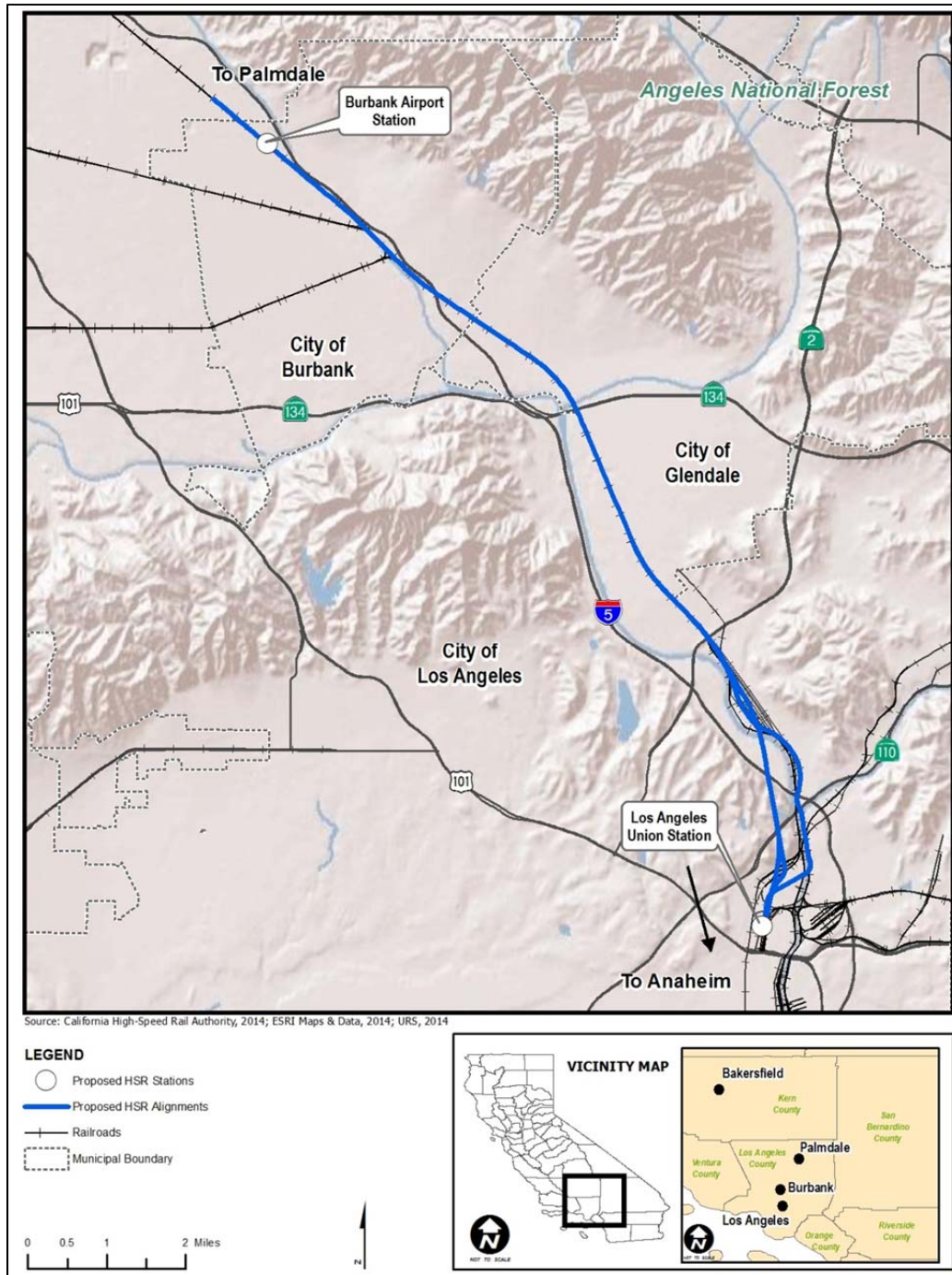
## **2.2 HSR System Infrastructure**

The HSR System is envisioned as a state-of-the-art, electrically powered, high-speed, steel-wheel-on-steel-rail technology, which would employ the latest technology, safety, signaling, and automated train-control systems. The trains would be capable of operating at speeds of up to 220 miles per hour (mph) (354 kilometers per hour [kph]) over fully grade-separated, dedicated tracks. The proposed infrastructure and systems of each HSR alignment alternative are composed of trains (rolling stock), tracks, grade-separated rights-of-way, stations, train control, power systems, and maintenance facilities. The design of each HSR alignment alternative includes a double-track right-of-way to accommodate operational needs for uninterrupted rail movement. Additionally, the HSR safety criteria recommend avoidance of at-grade intersections on dedicated HSR alignment alternatives and, therefore, the HSR System must be grade-separated from any other transportation system. This means that planning the HSR System also requires grade-separated overcrossings for roadways or roadway closures, and modifications to existing systems that do not span planned rights-of-way. In some situations, elevating the HSR System over existing facilities would be more efficient than elevating roadways.

## **2.3 Burbank to Los Angeles Section**

The Burbank to Los Angeles Section of the HSR System (Project) consists of densely urbanized areas over a distance of approximately 12 miles (19 kilometers), starting in the vicinity of the Burbank Airport Station in the City of Burbank. The Project corridor would run south following the existing railroad right-of-way, through the cities of Los Angeles, Burbank, and Glendale. The Project corridor would terminate in the City of Los Angeles, where a station is proposed at LAUS. An overview of the Burbank to Los Angeles Section is shown in Figure 2-2.

Since the 2007 NOP, several alternatives analyses have been conducted to refine project-level alternatives. A Preliminary Alternatives Analysis (July 2010) addressed alignment alternatives and station options throughout the Palmdale to Los Angeles Section. Three Supplemental Alternatives Analyses ("SAA") have also been prepared. The first SAA (March 2011) addressed supplemental alignment alternatives and station options for the Los Angeles to Sylmar subsection. The second SAA (April 2012) addressed supplemental alignment alternatives for the Sylmar to Palmdale subsection and redefined the subsection into two new subsections: the Santa Clarita subsection, extending from Sylmar to two miles east of Lang Station Road, and the Palmdale subsection, extending from two miles east of Lang Station Road to Palmdale.



**Figure 2-2**  
Burbank to Los Angeles Section

The third SAA (May 2014) discusses the concept of evaluating Palmdale to Burbank and Burbank to Los Angeles as two sections in light of, among other factors, the IOS concept (with its interim terminus in the San Fernando Valley/Burbank) introduced in the 2012 and 2014 Business Plans. The May 2014 SAA refined the alignment alternatives and station options, including withdrawing one alignment alternative and three station options, and recommending the Palmdale Transportation Center Station and the Burbank Airport Station for further analysis.

The Preliminary Alternatives Analysis and all SAAs included public outreach activities, including community meetings, stakeholder meetings, and public official outreach. The Preliminary Alternatives Analysis and SAA documents include a description of public outreach activities conducted. All alternatives analyses documents have been available for public review and comment as part of the alternatives analysis process, like all alternative analyses developed in this geographic area. (See [http://www.hsr.ca.gov/Programs/Statewide\\_Rail\\_Modernization/Project\\_Sections/palmdale\\_losangeles.html](http://www.hsr.ca.gov/Programs/Statewide_Rail_Modernization/Project_Sections/palmdale_losangeles.html) for copies of these AA documents). The work and information contained in the Palmdale to Burbank portions of those alternatives analyses documents, will inform the Authority in developing (and inform the public in commenting on) the Palmdale to Burbank EIR/EIS.

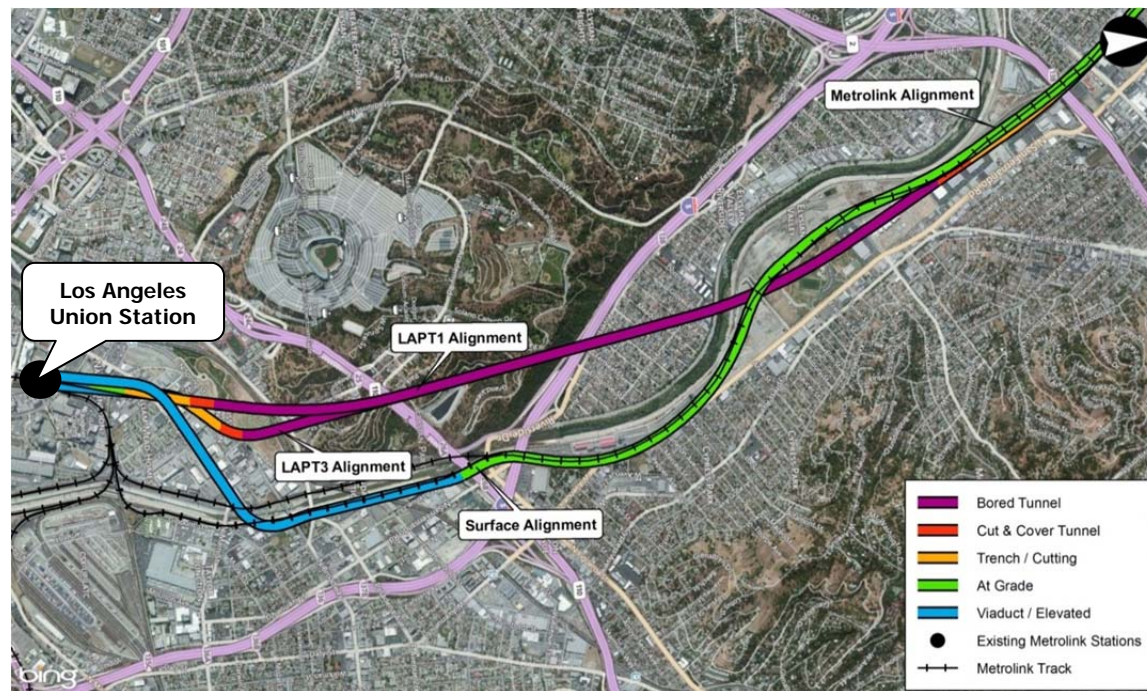
### **2.3.1 Alignment Options**

This section describes the Project alignment options that are evaluated in this Initial Study. There are three alignment options within the Burbank to Los Angeles Section. Each of these alignment options provides flexibility to match the preferred station options in the Los Angeles to Anaheim Section SAA from 2010. The three alignment options are shown below in Figure 2-3.

- LAPT1 Alignment Option
- LAPT3 Alignment Option
- Surface Alignment Option

#### **A. LAPT1 and LAPT3 Alignment Options**

The LAPT1 and LAPT3 alignment options are similar to one another for most of the Project corridor. Both alignment options would begin at the Burbank Airport Station in the City of Burbank and follow the railroad right-of-way, crossing beneath the existing elevated Interstate (I-) 5, State Route (SR) 134, and SR 2 at-grade, and then descend rapidly into a trench. Both alignment options would then transition into a cut and cover tunnel section with a bored tunnel portal north of the Sonia M. Sotomayor Learning Academies in the City of Los Angeles. They would then pass beneath the Sonia M. Sotomayor Learning Academies and the Rio De Los Angeles State Park (RDLASP), crossing under the Los Angeles River at a depth of 120 feet (36.6 meters) below ground surface. A mid-tunnel vent shaft would be located close to the Los Angeles River. Both alignment options would continue under the Elysian Valley neighborhood, Elysian Park, and the Los Angeles State Historic Park (LASHP). Here, LAPT1 would diverge to the west of LAPT3 near its intersection with Casanova Street. The LAPT1 tunnel would pass under homes along Solano Avenue at a depth where vibration issues would not be a concern (over 100 feet deep). The bored tunnel would pass under the LASHP and transition through a cut and cover tunnel beneath Spring Street to emerge above grade to the south near LAUS.



**Figure 2-3**  
Proposed Burbank to Los Angeles Section Alignments

The bored tunnel of LAPT3 would also pass under the LASHP and transition into a cut and cover tunnel section. It would then rise to an open trench, closing several streets between Spring and Main Streets. LAPT3 would continue to rise on to a viaduct, which would lead in to the future station platforms at LAUS. The Metro Gold Line Light Rail tracks would need to be realigned, and the Metro Gold Line Light Rail viaduct north of LAUS would need to be partially reconstructed.

## B. Surface Alignment Option

The Surface alignment option would start at the Burbank Airport Station in the City of Burbank and share the same alignment as the LAPT1 and LAPT3 alignment options up until SR 2. The Surface alignment option would cross under the existing elevated SR 2 at grade, and continue at grade in the existing railroad right-of-way west of Sonia M. Sotomayor Learning Academies and the RDLASP, past the Metrolink Central Maintenance Facility (CMF). The existing railroad tracks would need to be realigned to accommodate the HSR tracks. South of the Metrolink CMF, the Surface alignment option would pass at-grade under the existing elevated I-5, Figueroa Street viaduct (which would need to be reconstructed) and elevated SR 110. The Surface alignment option would then climb onto a viaduct over the Metro Gold Line Light Rail right-of-way, Broadway, and Spring Street. Additional land to the east of the Metro right-of-way would need to be acquired to construct this viaduct. South of Spring Street, the Surface alignment option would swing east away from the existing railroad right-of-way, then swing back to cross the Los Angeles River on a long span structure, before continuing on viaduct alongside Main Street and terminating at LAUS.

### 3.0 Environmental Checklist Form

Based on Authority and FRA decisions following the program-level EIR/EIS documents, the lead agencies adopted project design features to avoid and minimize impacts as part of the project. Many of these project design features will be effective at impact avoidance or at ensuring impacts are less than significant without further mitigation. The following checklist conservatively identifies several impact areas that the agencies can reasonably expect to be avoided or minimized based on the project design features as potentially significant at the IS stage. All issue areas will be evaluated in detail in the project-level EIR/EIS based on the unique conditions in the Palmdale to Burbank section and an explanation for how the project design features avoid or minimize impacts will be provided where that is the case.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>I. AESTHETICS. Would the project:</b>				
a. Have a substantial adverse effect on a scenic vista?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Substantially degrade the existing visual character or quality of the site and its surroundings?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>II. AGRICULTURE AND FORESTRY RESOURCES. Would the project:</b>				
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Result in the loss of forest land or conversion of forest land to non-forest use?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>III. AIR QUALITY. Would the project:</b>				
a. Conflict with or obstruct implementation of the applicable air quality plan?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air-quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Expose sensitive receptors to substantial pollutant concentrations?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Create objectionable odors affecting a substantial number of people?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>IV. BIOLOGICAL RESOURCES. Would the project:</b>				
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Communities Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>V. CULTURAL RESOURCES. Would the project:</b>				
a. Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Disturb any human remains, including those interred outside of formal cemeteries?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>VI. GEOLOGY AND SOILS. Would the project:</b>				
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Result in substantial soil erosion or the loss of topsoil?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>VII. GREENHOUSE GAS EMISSIONS. Would the project:</b>				
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Conflict with an application plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>VIII. HAZARDS AND HAZARDOUS MATERIALS. Would the project:</b>				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Create a significant hazard to the public or the environment through the reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>IX. HYDROLOGY AND WATER QUALITY. Would the project:</b>				
a. Violate any water quality standards or waste discharge requirements?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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e. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Otherwise substantially degrade water quality?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j. Inundation by seiche, tsunami, or mudflow?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>X. LAND USE AND PLANNING. Would the project:</b>				
a. Physically divide an established community?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited, to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>XI. MINERAL RESOURCES. Would the project:</b>				
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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<b>XII. NOISE. Would the project result in:</b>				
a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>XIII. POPULATION AND HOUSING. Would the project:</b>				
a. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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<b>XIV. PUBLIC SERVICES</b>				
a. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
Fire protection?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Police protection?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Schools?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Parks?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other public facilities?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>XV. RECREATION</b>				
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>XVI. TRANSPORTATION/TRAFFIC. Would the project:</b>				
a. Conflict with an application plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways, and freeways, pedestrian and bicycle paths, and mass transit?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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b. Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Result in inadequate emergency access?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>XVII. UTILITIES AND SERVICE SYSTEMS. Would the project:</b>				
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Result in a determination by the wastewater treatment provider which serves or could serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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g. Comply with federal, state, and local statutes and regulations related to solid waste?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>XVIII. MANDATORY FINDINGS OF SIGNIFICANCE</b>				
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## 4.0 References

- California High-Speed Rail Authority. 2007. Notice of Preparation of a Project Level Environmental Impact Report / Environmental Impact Statement for the Palmdale to Los Angeles section of the California High-Speed Train System. State Clearinghouse Number 2007031066. March 2007.
- California High-Speed Rail Authority. 2012. California High-Speed Rail Program Revised 2012 Business Plan, Building California's Future. April 2012.
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- California High-Speed Rail Authority and Federal Railroad Administration. 2005. Final Program Environmental Impact Report/Environmental Impact Statement for the Proposed California High-Speed Train System. August 2005.
- California High-Speed Rail Authority and Federal Railroad Administration. 2010. Palmdale to Los Angeles Preliminary Alternatives Analysis Report. July 2010.
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- California High-Speed Rail Authority and Federal Railroad Administration. 2012. Palmdale to Los Angeles Supplemental Alternatives Analysis Report. April 2012.
- California High-Speed Rail Authority and Federal Railroad Administration. 2014. Palmdale to Los Angeles Supplemental Alternatives Analysis Report. May 2014.

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